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National Rail

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Dear Dr Michael

**NOTICE OF INTENTION TO DETERMINE CERTAIN ROUTES:
SUPPLEMENTARY SUBMISSION**

Thank you for inviting National Rail to provide an additional submission, expanding on the issues identified in my letter dated 17 December 2001.

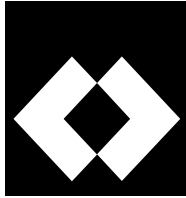
National Rail is pleased to provide the attached supplementary submission.

The supplementary submission relates specifically to the Midland – Kalgoorlie route. However, the underlying principles would also apply, to some extent, to the other routes over which it is intended to determine ceiling prices.

National Rail representatives would be available if required during your determination process to give any additional information needed in support of the submission.

Yours sincerely

W D McLeod
Manager Infrastructure and Access



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**SUPPLEMENTARY SUBMISSION TO THE RAIL ACCESS
REGULATOR, WESTERN AUSTRALIA**

re

Notice of Intention to Determine Ceiling Prices on Certain Routes

January 2002



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INTRODUCTION

1 General

This supplementary submission is in response to the Western Australia Rail Access Regulator's notification of intention to determine ceiling costs for track access on various routes. The determination is to be made pursuant to Clause 9 of Schedule 4 of the Railways (Access) Code 2000 ("the Code").

The submission relates specifically to the Midland – Kalgoorlie route. However, the underlying principles would also apply, to some extent, to the other routes over which it is intended to determine ceiling costs.

2 Composition of Ceiling Costs

Clause 1 of Schedule 4 of the Code identifies that costs comprise:

- ▶ Capital costs;
- ▶ Operating costs; and
- ▶ Overheads.

This submission comments on selected issues relating to capital costs and operating costs, as well as on some miscellaneous issues. The comments are made with specific reference to WestNet Rail's statement of Costing Principles dated November 2001.



CAPITAL COSTS

1 General

Clause 1 of Schedule 4 to the Code specifies that capital costs are to be calculated by applying:

- ▶ The Gross Replacement Value of the railway infrastructure;
- ▶ The Weighted Average Cost of Capital; and
- ▶ An economic life which is consistent with the basis adopted for the Gross Replacement Value.

Clause 1 of Schedule 4 also specifies that Gross Replacement Value is to be calculated as the lowest current cost to replace existing assets with modern equivalent assets which have the capacity to meet actual and reasonably projected operational demand.

Clause 2.3 of WestNet Rail's Costing Principles asserts that "the majority of the existing track configuration ... can be adopted as the modern equivalent assets".

National Rail submits that, with respect to the Midland – Kalgoorlie route, such an approach would represent an inappropriate simplifying assumption, likely to result in a misleading determination of Gross Replacement Value.

2 Background

The Midland – Kalgoorlie route comprises double tracks between Midland and Avon Yard (101 km), each of dual [narrow + standard] gauge, and a single standard gauge track between Avon Yard and Kalgoorlie (540 km).

This railway was constructed in the 1960s, replacing a former narrow gauge railway. The new standard gauge connection was intended to provide a high capacity railway for the transport of iron ore from Koolyanobbing to Kwinana, and to extend the standard gauge interstate network from Kalgoorlie to Perth.

Following construction of the new standard gauge railway, narrow gauge operations on the lines feeding into Millendon Junction, Toodyay West and Avon Yard were able to continue via the dual gauge tracks.

Considerable changes in traffic patterns have evolved since the line was built. The iron ore traffic from Koolyanobbing now runs to Kalgoorlie (and thence to Esperance), and interstate freight has increased considerably. General intrastate freight traffic on both standard and narrow gauge, previously a significant part of railway activity, now comprises only standard gauge trains direct between Perth and Kalgoorlie.



Bulk grain in unit trains remains an important freight commodity, and is the predominant traffic remaining on narrow gauge.

3 Configuration of the Railway

National Rail submits that the modern equivalent assets which have the capacity to meet actual and reasonably projected operational demand may not comprise the infrastructure configuration which presently exists.

A specific operational study would be required to determine the minimum configuration for the modern equivalent assets. However, it is considered that this is likely to comprise separate, single track standard and narrow gauge lines between Midland and Avon Yard. These could be constructed at a cost significantly lower than would be applicable to the present dual gauge track configuration over this section.

4 Route Standards

When the present standard gauge railway was constructed, considerable attention was given to ensuring optimum gradients for the predominant planned traffic, iron ore carried west from Koolyanobbing. A ruling gradient of 1 in 150 was adopted in each direction.

Nowadays the predominant movements are interstate through trains, which face ruling gradients of 1 in 100 in both directions at various locations between Port Augusta and Kalgoorlie. This means that locomotive power on interstate trains is not fully utilised between Perth and Kalgoorlie.

Therefore, in determining the minimum configuration for modern equivalent assets, consideration should be given to gradients. The significance of construction cost savings resulting from adoption of a ruling gradient of 1 in 100 should be assessed, together with the difference in operators' costs between the two gradient options.

5 Track Structure

WestNet Rail's Costing Principles (Clause 2.3) adopt the existing infrastructure standards, except for upgrading the remaining 75 km of timber sleepere track to concrete sleepers.

It is submitted that such a track structure is an inadequate minimum configuration for the modern equivalent assets. The minimum configuration should comprise the standards agreed and adopted by the Australian Transport Council for the Defined Interstate Rail Network, i.e. capable of accommodating 25 tonne axle loads and a standard train length of 1,800 m. At present, axle loads are limited to 23 tonnes (approval pending). Only a restricted number of trains can be operated at standard length, because of restricted availability of 1,800 m long crossing loops.

On a separate narrow gauge route, the track structure adopted could be that which enables operation of axle loads equivalent to those on the feeder lines. It is



understood that these are normally limited to 19 tonnes, offering considerable potential savings in construction costs in comparison to the present configuration.

6 Train Control and Signalling

It is submitted that the modern equivalent assets for train control would comprise a single train control centre, instead of the present train control locations at Perth, Merredin and Northam, and the local signal box at Kalgoorlie.

With regard to signalling systems, rapid advances in technology are occurring throughout the world. A continuation of the present system of centralised traffic control, which has a high capital cost and heavy field maintenance requirements, is unlikely to represent the most appropriate configuration for modern equivalent assets.

A specialist assessment would be required to determine the optimum train management system for the Midland – Kalgoorlie route. As a starting point, it should be determined if an electronic authority system (as described in the Code of Practice for the Defined Interstate Rail Network, Volume 3) would suffice for the traffic densities operated on standard gauge.

On a separate narrow gauge line, a basic system of train order working, as used elsewhere on WestNet Rail's narrow gauge lines, would adequately meet operational needs.

7 Design, Construction and Project Management Fees

The application of an engineering and design fee of 16.5% of project cost is considered excessive for repetitive type work such as construction of a railway. It is submitted that engineering and design should comprise less than 10% of project cost.

8 Economic Life of Components

The economic life is understood to be the period over which an asset, with normal maintenance inputs, would be expected to become life expired and require replacement.

In this regard, it is noted that WestNet Rail proposes adopting an economic life for rail of 50 years (Costing Principles, clause 7.1). Modern steel manufacturing technology and rail industry practice are such that, with proper maintenance, rail in straight track is expected to have a life of at least 1,000 million gross tonnes (mgtk). This suggests that on the Midland – Kalgoorlie corridor, the economic life of rail would be closer to 100 years on single track sections, and indefinite on double track sections or on a separate narrow gauge line.



OPERATING COSTS

1 Infrastructure Maintenance

WestNet Rail advises that it has structured a maintenance regime for the new, modern equivalent assets which will allow the assets to function during their economic life, and with complete replacement being required at the end of this life (Costing Principles, clause 3.1).

WestNet Rail also advises that it has calculated the costs of maintenance based on its knowledge and experience as an infrastructure maintainer.

However, the maintenance regime required for new, modern equivalent assets being maintained for a defined economic life will be quite different to the maintenance regime being applied to the present infrastructure. This will be particularly so if the asset configuration differs from the existing railway as proposed in this submission.

WestNet Rail's present methods of arranging maintenance (by a combination of in-house resources and contract), and the associated cost structure, are therefore of little relevance in establishing the efficient cost of maintaining from new the hypothetical modern equivalent assets.

National Rail submits that further details of the proposed maintenance regimes should be provided by WestNet Rail, and made available for public comment by the Regulator. It will be particularly important to ensure that partial renewals or upgradings of assets, resulting in extension of their economic lives, are not included as part of maintenance costs.

2 Special Maintenance Standards for Specific Traffics

In the process of determining ceiling prices, consideration will need to be given to how special maintenance standards and costs associated with specific rail traffics will be dealt with.

For example, if high-speed passenger services are contemplated, track geometry standards may need to be higher than would be required for normal passenger and freight traffic.

Also, the inspections required on a railway carrying passenger traffic may be more frequent than those needed on a freight-only route.

It is submitted that the ceiling price determined for freight traffic should not incorporate provision for any estimated costs incurred solely on account of passenger traffic.



3 Operational Management

As noted under capital costs above, train operations management costs should be based on the modern equivalent of one train control centre, and the abolition of signal boxes, allowing greater flexibility of staffing allocations to suit varying workloads at different times during the week.



MISCELLANEOUS ISSUES

1 Construction Period

WestNet Rail advises that, for the purpose of assessing the cost of capital during the construction period, the railway infrastructure is assumed to be constructed at a rate of half a kilometre per day (Costing Principles, clause 2.3).

It is submitted that this assumed rate of construction is excessively slow, requiring over four years for construction of the 742 track kilometres between Midland and Kalgoorlie. This is significantly longer than the railway originally took to construct, 35 years ago.

For comparison, as an example of current practice, the new railway between Alice Springs and Darwin is planned to be constructed at an overall rate of about 1.3 km per day.

It is submitted that the cost of capital during the construction period should be based on an optimally expeditious construction programme, and on commissioning completed portions of the work on a progressive basis. For example, in this notional exercise, completion between Koolyanobbing and Kalgoorlie would allow revenue to be earned from this sector, enabling accumulation of capital servicing costs for this sector to cease.

2 Ceiling Variation

WestNet Rail propose to adopt an approach of varying the ceiling cost on an annual basis in line with movements in CPI (Costing Principles, clause 5.1).

It is submitted that ceiling costs should not be varied in accordance with CPI, for the following reasons:

- ▶ The ongoing improvements in cost efficiency which have occurred in the rail industry have not reached a plateau; continuous improvement must be ongoing if rail is to retain its competitiveness with other transport modes; and
- ▶ CPI is not necessarily an appropriate indicator for measuring movements in the cost of constructing and operating railways.

Ceiling costs should be fixed during the periods between recalculations.



SUMMARY

In conclusion, National Rail submits that:

- ▶ WestNet Rail's proposal that the existing track configuration between Midland and Kalgoorlie be adopted as the modern equivalent assets should be reviewed in detail;
- ▶ A more economical track configuration, such as separate standard and narrow gauge tracks between Midland and Avon Yard, is likely to be appropriate;
- ▶ The track gradient to be adopted for the modern equivalent assets should be reviewed;
- ▶ The track structure for standard gauge on the Defined Interstate Rail Network should be based on the operational criteria adopted by the Australian Transport Council;
- ▶ The track structure for narrow gauge between Midland and Avon Yard should be equivalent to that on the narrow gauge feeder lines;
- ▶ One train control centre should be assumed for the modern equivalent assets;
- ▶ The optimum train management system between Midland and Kalgoorlie should be investigated – existing centralised traffic control is unlikely to be appropriate;
- ▶ Train order working should be satisfactory for narrow gauge lines;
- ▶ Engineering and design should comprise less than 10% of project cost;
- ▶ The proposed economic life for rail should be reviewed;
- ▶ Assumed maintenance regimes should be detailed by WestNet Rail and made available for public comment;
- ▶ Ceiling prices determined for freight traffic should not incorporate provision for any estimated costs incurred solely on account of passenger traffic;
- ▶ More realistic assumptions regarding construction periods should be adopted; and
- ▶ Ceiling costs should be fixed during the periods between recalculations.